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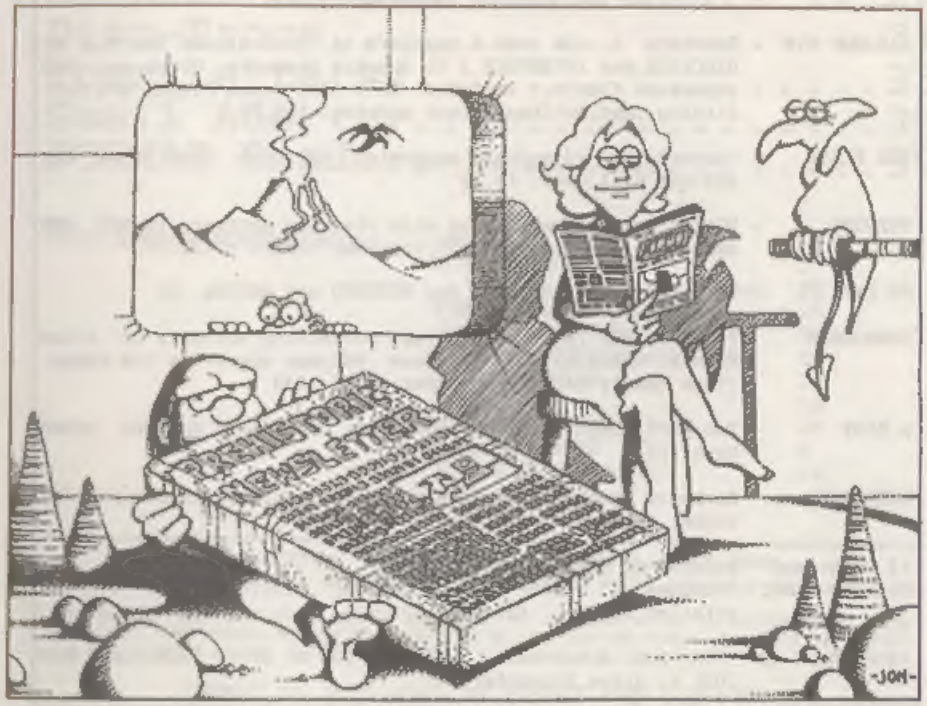
Vol.5 - Nº 12. August 1992.

FORMAT

FOR SPECTRUM AND SAM USERS



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NEWS ON 4

ALL FORMATS SPLIT

Bruce Everiss, proprietor of the All Formats Shows, has had a rather acrimonious split with JRMH Media who were responsible for selling stand space at the shows. The Birmingham show on the 18th July was the first to be organized by Bruce on his own.

John and Christian Riding of JRMH Media refused to comment on the dispute but thanked exhibitors and show-goers for their past support. JRMH may start their own shows later this year, but in the meantime are involved with organizing the Hobby & Enthusiasts show (see below).

WELSH FAMILY SHOW

The weekend of the 22nd & 23rd August will see a special event at the Royal Welsh Showgound near Builth Wells. Entitled HOBBY & ENTHUSIAST '92 the show will be a real day out for all the family.

The show is designed to attract a wide variety of visitors to events covering Model and Craft, Knitting and Stitching, Classic and Racing cars, and most importantly to FORMAT readers - a Computer Fair selling all things computing under one roof.

The show is open both days from 10am to 7pm and the showground is within easy reach of Birmingham, Bristol, Gloucester, Cardiff and well beyond. Admission (covering the whole event) is just £5 on the gate. Advanced tickets (£4) and family tickets (allowing two adults and two kids to get in for £10) are available by calling 0222 230130.

SAMS AT JOHN MENZIES

While the SAMCO situation is sorting itself out it may interest readers to know that Several John Menzies shops have still got stocks of the computer and of the much sort-after disc drives.

Shops as far afield as Torquay and Aberdeen are reported to have machines available which they are now selling at £79 with disc drives costing as little as £50.

Go on, badger your local branch, see what they can get for you.

ROMANTIC ROBOT SALE

Spectrum interface veteran Romantic Robot are pulling out of 8 bit computing according to their latest adverts. They are selling off their existing stocks of the different Multiface and Videoface devices at reduced prices.

Romantic Robot can be contacted on 081-200-8870.

DOOMSDAY FOR PLUS D

A version of the 128k Spectrum adventure DOOMSDAY by Graham Burtenshaw has been produced for the DISCiPLE and PLUS D users by Quest Software of 10 Westerkirk Drive, Madeley, Telford, TF7 5RJ.

The program costs £5.50 on disc (also available for £4.50 on tape and is described as one of the most controversial games to be released in the past few years.

HOBBIT AVAILABLE IN UK

Reports have appeared in recent weeks the the legendary HOBBIT is in Britain. The Hobbit you may remember was a Russian clone on the 48K Spectrum with extra ROM, RAM, and a separate disc drive.

At this time the importers will not confirm that the machine is available from stock but we will bring you more details as we get them.

News Credits: Brian Gaff, Alan Cox

URGENT we need your news. Anything you think other people should know about. Items printed earn contributor 3 month extra subscription (please claim when renewing).

By now many of you will have heard the shock news that Sam Computers Ltd had been forced into liquidation. I know that Alan Miles and Adrian Parker are both very saddened at what has happened, both have been working long hours (together with several others at SAMCO) to keep things going. In the end it was something beyond their control that forced the collapse.

Still, the good news is that the SAM will survive. A company called West Coast Computers had been talking with SAMCO for several months to arrange a UK franchise for the sale of the machine. It now looks certain that they will make a bid to bring SAM back into production provided they can raise the extra risk capital needed to have fresh stocks of the machine made in the UK. Already, from among SAM's loyal fans, over half of the required money has been pledged in the form of personal loans to the company. If anyone is interested in helping the situation then please give me a ring and I will put you in contact.

Although SAMCO is no-more, we at FORMAT will of course continue to support the SAM Coupe and its users. Other companies, too numerous to mention here, will also continue their support. Software and hardware will continue to be produced and I know there are several new items just around the corner. Even if, heaven forbid, the Coupe was not relaunched (and I think that is VERY unlikely) then there is no reason for SAM owners to feel dejected. Sam has a future - the number of supportive telephone calls to us; Samco; and the liquidator, all go to prove that.

Right, that is the bad news over with. Now on to the good news. It is with great pleasure that I can announce that FORMAT Publications have taken over our only real rival as a serious publication - Sinclair & Sam Computing. Originally started by Daniel Garner, in March 1991, S&SC had suffered frequently from publication delays, but had reached issue five. We have taken over both the name and goodwill and will be converting all existing S&SC subscriptions into ones for FORMAT. Garner Designs are providing a full list of outstanding subs and we will be writing to people over the next few weeks. If you haven't heard from us by the 21st August please give me a ring just to make sure you are on the list. Any orders for software etc will continue to be handled from Daniel's Bedford address but any queries on the magazine and subscriptions should be sent to us in Gloucester.

From next month we will start to include S&SC items in FORMAT and I hope to see an increase in the page-count of FORMAT quite soon.

I'm sure that both the growth in readership and the broadening of FORMAT's horizons will prove beneficial to all.

One last thing before I go this month. An apology to anyone who tried to contact me on the Hotline during the last few days of July and the first two weeks in August. I was laid low with a chest infection, well I was able to get on with some work - talking was out of the question. I'm glad to say things are now back to normal both with me and the Hotline.

Bob Brenchley. Editor.

SD Software

SPECMAKER UNIDOS PC-SUITE

UNIDOS Version 2 of the incredible new DOS from Steve Warr for the PLUS D and DISCIPLE. Same DOS file for both systems. Random files. Sub directories. Hundreds of files on one disk. Hidden files. Protected files. Copy files of any length. Incredibly versatile screen dump routines. Error trapping. Many more features. Compatable with all Spectrums*. Over 20 programs now included on the disk. * +2A/+3 restricted to 48K mode.

SPECFILE+ Now a Spectrum data filing program that never gets out of date. Specfile+ holds a massive 28K of data and by using data compression makes it seem like much more. Very fast CASE selective and complex searches. Designed to be added to so it grows as you do. This program is a must have for any one with data to hold.

SPECMAKER The simplest Spectrum emulator for your SAM. 1000s of 48K programs work without the need for any conversion. Most other programs need only minor changes. All the extra SAM keys work in Spectrum mode. Uses SAM's parallel printer port and up to 360K of SAM memory as a RAMDISK. PLUS D and all OPUS diskse can be loaded into SPECMAKER and saved to SAM disk. Can now convert files between Messanger & SPECMAKER format and so save on valuable disk space. Supplied on 3.5" disk *Master Dos & Master basic required for single density OPUS

PC-Suite. From the author of SPECMAKER S.D. Software brings you PC-SUITE. Now you can transfer your IBM data files by reading and writing IBM disks on your Sam. PC-Suite will let you format IBM disks on Sam. Write Sam basic programs on your PC.AT. Use PC-Suite to copy Sam data files to PC disk and print them on a high quality laser printer. Many more uses.
nb. Not a PC emulator.

INDUG PRICES		NON MEMBERS
Specfile+	£ 9.95	£12.95
UNIDOS	£19.95	£25.95
Createfile Manual	£ 5.50	£ 6.50
Specmaker	£ 9.95	£12.95
Specmaker Upgrade	£ 6.50	£ 8.00
PC Suite	£19.95	£25.95
IBU* /SAMIBU	£ 3.50	£ 4.90
DBU*	£ 4.00	£ 5.50
File Convertor*	£ 4.50	£ 5.30
Hackers Workbench*	£ 8.50	£ 9.90

Don't forget to say if ordering for PLUS D or DISCIPLE and the size of disk required. (PLUS D, 3.5 inch BOT will be sent otherwise)

* GDOS programs still available *

PLEASE Add £0.50 Postage (£1.20 OUTSIDE UK)

DO NOT FORGET YOUR INDUG MEMBERSHIP NUMBER

S.D. Software, 70 Rainhill Road, Barnoldswick, Lancashire, England. BB8 5AB.

SHORT • SPOT

Edited By:- John Wase.

Once again, it's Short Spot time. This month, everything and everybody's been affected by the heat. This means that the postbag's been much smaller than usual. Fortunately, my Great Reorganisation has continued apace, and a small mound of things that I put on one side, or that have slipped between others, or that Bob cut to make my text fit after I sent it to him, has appeared. So some of these items have been around for quite some time: my apologies, but better late than never.

First, a real goodie. A proper short spot from Geoff Sell of Walmley, Sutton Coldfield. "A quick hint for people with a +3", he writes. "If after transferring a game to the +3, you find the drive motor continues to run, POKE 23394,4 just before the 'RANDOMIZE USR' which starts the game, and the motor will stop". Simple as that. Many thanks, Geoff. Geoff's hint is particularly welcome, as the number of +3-specific items is very small. Let's stick with the +3 for a minute, though. Basil Lankester of Little Torrington, Devon ages ago sent me a request for information. As I didn't know the answer, it got put to one side, and had found its way into a file on printers, which I cleared out today. My apologies, Basil. Basil wanted a short program or command; a POKE, maybe, enabling one to change permanently the default drive on a +3 from 1 to 2 (A to B in Amstrad pseudo-CP/M-speak). He writes "As I use a Spectrum +3 in the main, and sometimes a +2, there are occasions when such a command could be most useful, especially, of course, the +3, which is tied to a Citizen 3.5" drive. I think primarily of "Wordmaster" and "Tascalc" programs. Well... I can see now what the problems were. There's a certain amount of ambiguity about what Basil said. The +3 has, of course, one of the dreaded 3" drives which proved so unpopular, not a 3.5" drive. Either Basil means that he had a 3.5" drive as drive B, or that he had one attached to his +2 with a PLUS D, or both. Well, firstly, for any who don't know, the pseudo CP/M disc operating system on the +3 formats things totally differently from the PLUS D +2 format, so the two are essentially incompatible. So if you're trying to transfer information from one to the other, it's usually quicker by cassette or RS232. The only listing to change default drives on the +3 has come from my great source of wisdom, Brian Gaff, and runs as follows:

```
  10 GOSUB 9000: STOP
9000 RESTORE 9999: FOR X=1 TO 4
9005 READ X$: SAVE X$: LOAD X$
9010 PRINT #1;AT 1,0;"DRIVE SET TO ";X
     $;" SPACE TOGGLES": PAUSE 0
9020 LET Z$=INKEY$
9030 IF Z$=" " THEN NEXT X: GOTO 9000
9040 BEEP .1,23: INPUT :: RETURN
9999 DATA "A:","B:","M:","T:"
```

Mind you; this doesn't really do what you had in mind, because the software can immediately alter the default drive.

The sad truth is that as they are hardware controlled, you can do no more with software: you have to get a soldering iron out and pass several leads to the drives through a double pole switch, thus switching them mechanically. Not a very elegant solution, but it works.

Whilst we're having a +3 month, I ought to mention a letter I've had from Kevin Gould. Poor Kevin rushed out and entered my piece from July's format which showed you how to get the +2a's printer port working from 48k mode: you recall, the +2a has a +3 circuit board, so the two are similar

machines, and this applies to the +3, too. Unfortunately, Kevin had a PLUS D. With this disconnected, the thing works fine. Same without DOS loaded. But as soon as DOS is in place, the printer won't work in +3 Basic. Various combinations of DOS and the program cause a 48k to crash. Oops... The problem is, Kevin, that at the moment, both devices are trying to grab channel 3, and the crashes are the result. Now I remember that a lot of the printer initialisation routines are loaded from the PLUS D boot disc. If you do a new boot disc, and when the questions come up about your printer, say you don't want to use one, then the PLUS D leaves the printer channel alone.

Incidentally, you don't tell us how you are managing to use the PLUS D and the Spectrum - I guess you must have a 'Fixer'. If so, you probably have Brian Gaff's phone number - he'll be able to help with the hardware fix.

Next, to Ettrick, Ettrick Thomson, of course, of Aldeburgh, Suffolk, who mentions that in June's 'Short Spot', Chris Laird gives a string expression of a 2- digit integer, x, with a leading zero if necessary, namely ("0" AND x<10)+STR$ x. Ettrick writes that if you need more than two digits, this method gets unwieldy. The string expression:-

(STR$ (100+x))(2 TO)

will also handle a two-digit number, and if you want n digits with leading zeros, n being less than 8, you replace 100 by 10..00 with n zeros. Many thanks Ettrick.

Let's stick with the Spectrum. Next, a letter from behind the bookshelf (sorry) from John Geisow of Abingdon, who previously sent in a 'condense screen' program. Yes; it was a bit long: I'll try and dig it out and send it to Bob. Meanwhile, to keep my fingers busy, he's sent me a method of passing variables to machine code. John writes that he's seen quite a few complicated methods, but he thinks that using the system variable DEST is perhaps the easiest. It requires only a Basic statement, such as LET a=a or LET a(x)=a(x) which points DEST at the variable, then RANDOMIZE USR (machine code address) where LD IX,(5C4D) points IX at the variable, and you can easily pick it up with an appropriate displacement.

Here is an example of picking up two variables to delete a block of lines from a Basic program.

BASIC

```
10 INPUT "DELETE FROM LINE NO.";L '"
   TO & INCLUDING NO.";G
20 LET L=L: LET G=G+1: RANDOMIZE USR
   65236
```

MACHINE CODE

```
62536 LD IX,(23629)
      LD L,(IX-3) Get start into HL
      LD H,(IX-2)
      CALL 6510 Get address of LINE L
      PUSH HL Save it
      LD L,(IX+3) Get end into HL
      LD H,(IX+4)
      CALL 6510 Get address of LINE G
      POP DE Address of LINE L into DE
      XOR A
      SBC HL,DE Calculate difference
      LD B,H Transfer it to BC
      LD C,L
      EX DE,HL First byte into HL
      CALL 6632 Reclaim bytes
      RET
```

I hope this shows the principles. Many thanks John.

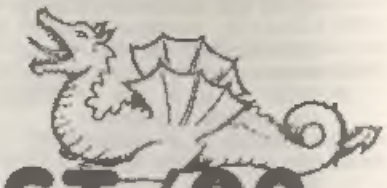
Over to SAM for a few minutes. Jason Ellmers of St Lawrence Bay, Essex, sent in this little bit of nonsense with which to confuse your mates. Tell them you're working for the Royal Ordnance, and that due to the cuts in the defence budget, the programs must be capable of running on SAM. And that this is an example. (Add an autoload line for an appropriate silly program at the end...)

```
 1 REM PASSWORD
 2 REM
 3 REM BY J. ELLMERS
 4 REM
 5 REM
10 LET A$="M"+"E"+"R"+"I"+"T": POKE
   SVAR 618,8: DPOKE 23264,0: POKE
   23361,1: REM A$=PASSWORD, POKES
   ARE TO STOP ESC AND BREAK
20 MODE 4: CLS : PALETTE 2,34,54
30 PRINT AT 10,0; PEN 2;"AUTHORIZAT
   ION NEEDED FOR ENTRY"
40 PRINT AT 18,0;"PASSWORD? "
50 GET B$: GET C$: GET D$: GET E$:
   GET F$
60 IF B$+C$+D$+E$+F$=A$ THEN ACC: E
   LSE CRA
70 DEF PROC ACC: CLS : PRINT AT 10,
   4;"AUTHORIZATION ACCEPTED": GOTO
   90: END PROC
80 DEF PROC CRA: CLS : PRINT AT 10,
   7; PEN 2;"ACCESS DENIED": RANDOM
   IZE USR 0: END PROC
```

Remember "Bigletters"? Jason's also sent in this rather smart variant... One of the nice things is the DUMP incorporated in it.

```
 1 REM LETTERS 2
 2 REM
 3 REM BY J. ELLMERS
 4 REM
10 MODE 4: ON ERROR RUN
15 LET X=0,Y=173
20 POKE SVAR 618,8
25 LET XX=1,YY=1
30 DO
35 GET M$
40 IF M$="" THEN STP
45 LET D=445+CODE M$
50 IF D=477 THEN LET X=X+25*XX
55 IF D=458 THEN DMP
60 IF X+25*XX>=255 THEN LET X=0,Y=Y
   -35*YY
65 IF Y-35*YY<-16 THEN DMP
70 IF D=457 THEN DEL
75 IF D<510 OR D>535 THEN GOTO 140
80 RESTORE D: READ A
85 PLOT X,Y
90 FOR F=1 TO A
95 DIM Q(A)
100 DIM W(A)
105 READ Q(F)
110 READ W(F)
115 IF Q(F)=99 AND W(F)=99 THEN PLT
120 DRAW Q(F)*XX,W(F)*YY
125 NEXT F
130 LET X=X+25*XX
135 IF X+25*XX>=255 THEN LET X=0,Y=Y
   -35*YY
140 LOOP
145 DEF PROC PLT
150 READ S
155 FOR F=1 TO S STEP 2
160 DIM E(S)
165 DIM R(S)
170 READ E(F): READ R(F)
175 PLOT X+E(F)*XX,Y+R(F)*YY
180 DRW2
185 NEXT F
190 END PROC
195 DEF PROC DRW2
200 READ K: READ L
205 DRAW K*XX,L*YY
210 END PROC
215 DEF PROC STP
220 INPUT "DO YOU WISH TO STOP ";Y$
225 IF Y$="Y" THEN STOP : ELSE GOTO
   25
230 END PROC
235 DEF PROC DEL
240 LET X=X-25
245 IF X<0 THEN LET X=225,Y=Y+35*YY
250 IF Y>173 THEN LET X=0,Y=173
255 FOR XXX=X+24 TO X STEP -1
260 PEN 0: PLOT XXX,Y: DRAW TO XXX,Y
   -30: PEN 7
265 NEXT XXX
270 END PROC
275 DEF PROC DMP
280 PRINT #1;"DUMP Y/N": GET Y$
285 IF Y$="Y" THEN : DUMP : RUN : EL
   SE RUN
290 END PROC
510 DATA 8,20,0,0,-30,-10,0,0,10,0,-
   10,-10,0,0,30,99,99,2,10,-5,0,-8
511 DATA 8,20,0,0,-15,-8,0,8,0,0,-15
   ,-20,0,0,30,99,99,4,7,-7,7,0,7,-
   22,7,0
512 DATA 7,20,0,0,-15,-10,0,10,0,0,-
   15,-20,0,0,30
513 DATA 7,15,0,5,-5,0,-20,-5,-5,-15
   ,0,0,30,99,99,2,10,-10,0,-10
514 DATA 10,20,0,0,-10,-10,0,10,0,0,
   -10,-10,0,10,0,0,-10,-20,0,0,30
515 DATA 9,20,0,0,-10,-10,0,5,0,0,-1
   0,-5,0,0,-10,-10,0,0,30
516 DATA 9,20,0,0,-15,-10,0,0,-5,0,5
   ,10,0,0,-15,-20,0,0,30
517 DATA 10,10,0,0,-10,0,10,10,0,0,-
   30,-10,0,0,10,0,-10,-10,0,0,30
518 DATA 12,20,0,0,-10,-5,0,0,-10,5,
   0,0,-10,-20,0,0,10,5,0,0,10,-5,0
   ,0,10
519 DATA 10,20,0,0,-10,-5,0,0,-20,-1
   5,0,0,10,5,0,0,10,-5,0,0,10
520 DATA 13,10,0,0,-10,0,10,10,0,0,-
   10,-10,-5,10,5,0,-20,-5,0,-5,10,
   5,-10,-15,0,0,30
521 DATA 6,10,0,0,-20,10,0,0,-10,-20
```

HOBBY & ENTHUSIAST '92



SATURDAY & SUNDAY - AUGUST 22nd & 23rd

THE ROYAL WELSH SHOWGROUND
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Adults £4 * 5/16 yrs & OAP's £2 * Family Ticket £10
call 0222230130


```
,0,0,30
522 DATA 13,10,0,0,-10,0,10,10,0,0,-
    30,-7,0,0,10,0,-10,-6,0,0,10,0,-
    10,-7,0,0,30
523 DATA 10,13,0,0,-10,0,10,7,0,0,-3
    0,-13,0,0,10,0,-10,-7,0,0,30
524 DATA 5,20,0,0,-30,-20,0,0,30,99,
    99,2,10,-10,0,-10
525 DATA 7,20,0,0,-15,-10,0,0,-15,-1
    0,0,0,30,99,99,2,7,-7,6,0
526 DATA 8,20,0,0,-25,5,-5,-5,-5,-5,
    5,-15,0,0,30,99,99,2,10,-10,0,-1
    0
527 DATA 11,20,0,0,-15,-8,0,8,0,0,-1
    5,-10,0,0,10,0,-10,-10,0,0,30,99
    ,99,2,7,-7,6,0
528 DATA 10,20,0,0,-10,-13,0,13,0,0,
    -20,-20,0,0,10,13,0,-13,0,0,20
529 DATA 8,20,0,0,-10,-5,0,0,-20,-10
    ,0,0,20,-5,0,0,10
530 DATA 7,10,0,0,-15,0,15,10,0,0,-3
    0,-20,0,0,30
531 DATA 9,10,0,0,-15,0,15,10,0,0,-1
    5,-5,-15,-10,0,-5,15,0,15
532 DATA 13,7,0,0,-10,0,10,6,0,0,-10
    ,0,10,7,0,0,-30,-10,0,0,10,0,-10
    ,-10,0,0,30
533 DATA 16,10,0,0,-10,0,10,10,0,0,-
    15,-8,0,8,0,0,-15,-10,0,0,10,0,-
    10,-10,0,0,15,8,0,-8,0,0,15
534 DATA 11,10,0,0,-10,0,10,10,0,0,-
    15,-5,-5,0,-10,-10,0,0,10,-5,5,0
    ,15
535 DATA 10,20,0,0,-15,-10,-5,10,5,0
    ,-15,-20,0,0,15,10,5,-10,-5,0,15
```

Many thanks, Jason.

Alan Cox of St Clears, a regular correspondent, writes in to mention that he has a solution to SAM's CSIZE problem in Nigel Schutte's program. You can cope with both SAMbasic and Masterbasic in this case (and Alan suspects most cases) by taking into account that Masterbasic records its presence in DVAR 7: 21 if Masterbasic is in use; 20 if not. Thus CSIZE 8*(1+(PEEK DVAR 7=21)),16 covers both cases. Obviously this will need watching as later versions of Masterbasic come out. Bless you, Alan

Amongst the pile of bits and pieces that's come to light is a letter from A.F.Olivera of Gibralter. I don't think I've used this, but I might have. I usually mark things I've used, and I can't find anything on this, though at times I'm very rushed. Certainly it bears repeating.

He writes that one of the nice things about Masterbasic is the use of the clock on the SAMbus and the ability to date all the files. But if you have no SAMbus? Well, you can still use the facility. Include the following line from which the program first runs...

```
9999 LABEL datefix
     IF DATE$ ( TO 2)="00" THEN
       ON ERROR STOP
       ON ERROR GOTO datefix
       POKE DVAR 150,0
       INPUT "TODAY'S DATE? (ddmmyy) "
       ;today$
       DATE today$
       ON ERROR STOP
```

The first statement sets a label to which the program returns if an error is detected. The next checks if a date's there already (in which case the rest of the routine's ignored). After checking that there's no SAMbus, the program prompts for today's date and installs it in MasterDOS.

The command DIR DATE has to be entered for the date to be shown. Such a directory is clearest in mode 3, but you do your programming in mode 4. Have a little routine like the one below to hand and all will be well.

```
MODE 3
CSIZE 8,8
DIR DATE *
INPUT "PROGRAM TO LOAD: ";N$
MODE 4
```

Finally, he returns to the Spectrum with the following tip. Beta Basic makes it very easy to edit a line, just like SAM. But without it - bad dear. LIST line number; ENTER; BREAK when the "Scroll?" message comes up and press EDIT. If you're lucky. If you avoid any line numbers ending in "9", all you've got to do is enter the preceding number and press EDIT. Like if you want line 4040, enter 4039 at the K cursor and press Edit. There it is in the editing area. My thanks,

Bert.

Still with the Spectrum, Roy Burford of Stourbridge has a wee gripe about small ells before mentioning that he prefers to CLEAR to the byte BEFORE the machine code starts, like the colour change program (CLEAR 32499). Roy mentions that an attribute byte of 85 does not give yellow letters on a red background; 22 does (0+0+8*2+6). He also kindly encloses a tape with a message display program different from last month's... There are lots of other undocumented items on the cassette, too. It'll take ages to look at them. Did you realise, Roy?... Here's "Slidisplay"

```
 10 REM TRS80-II SLIDISP/BAS
 20 REM Revised to ZX Spectrum+ 128K
    040791.
 30 BORDER 0: PAPER 0: INK 2
 40 INPUT "Enter message(28 chars.max
    ) :";x$
 50 IF LEN x$>28 THEN GOTO 40
 60 LET x$=x$+"    "
 70 LET l=LEN x$
 80 CLS
 90 PRINT #0;AT 1,0;"Press 's' to sto
    p:"
100 LET s$=INKEY$
110 IF s$="" THEN GOTO 130
120 IF s$="s" OR s$="S" THEN BORDER 7
    : PAPER 7: INK 0: STOP
130 GOSUB 180
140 LET x$=x$(2 TO )+x$(1)
150 PAUSE 7
160 GOTO 100
170 STOP
180 PRINT AT 10,1;x$;: RETURN
```

Let's keep with the Spectrum, now. Couple of real shorties from M.O'Connell of Erdingdon, Birmingham. Here goes...

To save a Basic program as code joined to a SCREEN$, merely prepare a SCREEN$ and save this - as a SCREEN$. Then load your Basic program. Add the line:-

```
9999 SAVE "name" CODE 16384,6500: GOTO
 n
```

where n is the line you want the program to autorun from. Finally issue as a direct command:-

```
LOAD SCREEN$ "name": GOTO 9999.
```

Simple, isn't it...

Another neat dodge is to get the computer to print something other than "PROGRAM: name" when a file is loading.

```
  10 LET S$="SILLY MESSAGE"
  20 LET S$=S$+ CHR$ 22+ CHR$ 1+ CHR$
0+ CHR$ 219+ CHR$ 23
```

Run it and save with:- SAVE S$ LINE XX

Nice one.

Mr. O'Connell includes a whole lot of programs for me. Unfortunately, they're all from "Sinclair User". As this is still in print, I can't repeat them, for copyright reasons. There's also one from "ZX Computing"; I guess I remember that mag. It's called "Speakwell" and allows you to play music into the Spectrum and replay it later in a digitised form. The program is menu driven. Here it is, to round off August's "Short spot".

```
  1 CLS
 10 BORDER 0: PAPER 0: INK 7: CLEAR 3
    2767: RESTORE 9920: GOSUB 9850
 20 LET SPEED=1: LET START=32855: LET
     LENGTH=32512
 30 GOSUB 9730
 40 RESTORE 9720: LET K$=INKEY$
 50 FOR F=1 TO 7
 60 READ A$,LINE: IF A$=K$ THEN GOSUB
     LINE: GOSUB 9810
 70 NEXT F
 80 GOTO 40
9230 PRINT AT 17,0; FLASH 1;"L -
    LOAD   S - SAVE   R - RETURN": PA
    USE 1: PAUSE 0: PRINT AT 17,0,,
9240 IF INKEY$="l" THEN GOTO 9280
9250 IF INKEY$="s" THEN GOTO 9320
9260 IF INKEY$="r" THEN PAUSE 1: RETUR
    N
9270 GOTO 9230
9280 INPUT "NAME OF FILE?  ";N$
9290 IF LEN N$>10 THEN PRINT AT 17,7;
    FLASH 1;"INVALID FILE NAME": GOTO
     9280
9300 LOAD d1;N$CODE
9310 RETURN
```



```
9320 INPUT "NAME OF FILE?  ";N$
9330 IF LEN N$>10 OR N$="" THEN PRINT
    AT 17,10; FLASH 1;"INVALID NAME":
     GOTO 9320
9340 PRINT AT 17,0,,: SAVE d1;N$CODE S
    TART,LENGTH
9350 RETURN
9380 INPUT "ADDRESS TO COPY FROM?  ";H
    L
9385 PRINT AT 17,0,,
9390 IF HL<32855 OR HL>65366 THEN PRIN
    T AT 17,6; FLASH 1;"INVALID COPY
    ADDRESS": GOTO 9380
9400 INPUT "ADDRESS TO COPY TO?  ";DE
9405 PRINT AT 17,0,,
9410 IF DE<32855 OR DE>65366 THEN PRIN
    T AT 17,2; FLASH 1;"INVALID DESTI
    NATION ADDRESS": GOTO 9400
9420 INPUT "NUMBER OF BYTES TO COPY?
    ";BC
9430 IF BC+DE>65367 OR BC+HL>65367 THE
    N PRINT AT 17,9; FLASH 1;"INVALID
     NUMBER": GOTO 9420
9440 POKE 65521,DE-256*INT (DE/256): P
    OKE 65522,INT (DE/256)
9450 POKE 65524,BC-256*INT (BC/256): P
    OKE 65525,INT (BC/256)
9460 POKE 65527,HL-256*INT (HL/256): P
    OKE 65528,INT (HL/256)
9480 IF BC=0 THEN RETURN
9490 RANDOMIZE USR 65520
9500 RETURN
9510 INPUT "NEW SPEED?  ";SPEED
9520 IF SPEED<0 OR SPEED>255 THEN PRIN
    T AT 17,9; FLASH 1;"INVALID SPEED
    ": GOTO 9510
9540 POKE 32854,SPEED
9550 RETURN
9560 INPUT "NEW LENGTH?  ";LENGTH
9570 IF LENGTH<1 OR LENGTH+START>65367
     THEN PRINT AT 17,9; FLASH 1;"INV
    ALID LENGTH": GOTO 9560
9590 POKE 32852,LENGTH-256*INT (LENGTH
    /256): POKE 32853,INT (LENGTH/256
    )
9600 RETURN
9610 INPUT "NEW START ADDRESS?  ";STAR
    T
9620 IF START<32855 OR START>65360 OR
    START+LENGTH>65367 THEN PRINT AT
    17,8; FLASH 1;"INVALID ADDRESS":
    GOTO 9610
9640 POKE 32850,START-256*INT (START/2
    56): POKE 32851,INT (START/256)
9650 RETURN
9660 RANDOMIZE USR 32808
9670 RETURN
9680 PRINT AT 17,0; FLASH 1;"PRESS ANY
     KEY TO START RECORDING": PAUSE 1
    : PAUSE 0: PRINT AT 17,0,,AT 17,1
    1; FLASH 1;"RECORDING"
9690 OUT 254,15: RANDOMIZE USR 32768
9700 BEEP 1,5
9710 RETURN
9720 DATA "r",9680,"p",9660,"a",9610,"
    l",9560,"s",9510,"m",9380,"t",923
    0
9730 PRINT TAB 11;"SPEAKWELL"
9740 PRINT TAB 11;"---------"
9750 PRINT 'TAB 6;"R - RECORD SPEECH"
9760 PRINT 'TAB 6;"P - PLAY BACK SPEEC
    H"
9770 PRINT 'TAB 6;"A - ALTER START ADD
    RESS"
9780 PRINT 'TAB 6;"L - CHANGE LENGTH"
9790 PRINT 'TAB 6;"S - CHANGE SPEED"
9800 PRINT 'TAB 6;"M - MEMORY MANAGER"
     ''TAB 6;"T - TAPE OPERATIONS"
9810 PRINT AT 19,0;"START ADDR OF SPEE
    CH DATA:";START
9820 PRINT "END ADDRESS OF SPEECH DATA
    :";START+LENGTH
9830 PRINT "LENGTH OF SPEECH DATA:";LE
    NGTH;"    ":K$=$$-$1;AT 0,0;"RECO
    RD/PLAY SPEED:";SPEED;"   "
9840 PRINT AT 17,0,,: RETURN
9850 FOR F=32768 TO 32854
9860 READ A: POKE F,A
9870 NEXT F
9880 FOR F=65520 TO 65531
9900 READ A: POKE F,A
9910 NEXT F: RETURN
9920 DATA 243,42,82,128,237,91,84,128,
    6,8,14,0,237
9930 DATA 67,0,0,175,219,254,23,23,203
    ,17,16,247,113,58
9940 DATA 86,128,71,16,254,35,122,179,
    27,32,226,251,201,243,42
9950 DATA 82,128,237,91,84,128,6,8,78,
    203,9,203,9,203,9
9960 DATA 121,230,16,211,254,203,1,16,
    247,58,86,128,71,16,254
9970 DATA 203,135,35,122,179,27,32,224
    ,251,201,87,128,0,127,1
9980 REM BLOCK MOVE MACHINE CODE
9990 DATA 17,0,0,1,0,0,33,0,0,237,176
    201
```

Many thanks Mr O'connell.

And that's all for this month. Without your snippets, I can't put a column together. Please keep them coming to "John Wase, Green Leye Cottage, Bishampton, Pershore, Worcs. WR10 2LX." Bless you!

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Adventure Trail

By:- Adam Scott.

Before you start in playing your first adventure, I will give you a short rundown of some of the basic tools of the trade you may wish to equip yourself with:- a good pencil, an eraser, plenty of sheets of plain paper, a small notebook, a good supply of C15 or C20 cassettes (or discs if the adventure is disc based) and a flask of drink.

The pencil, eraser and plain paper will be very useful when it comes to mapping the adventure. The notepad is handy for noting down any potential clues, advice or problems that may be easier to solve away from the computer. The cassettes will come in handy for "saving" your position in the adventure. Most adventures have a SAVE option of some sort. The flask will keep you going during a riveting title, which prevents you from leaving the computer.

MAPPING

The usual way for mapping an adventure is to draw on your piece of paper, a number of equally spaced boxes (see fig 1), which are aproximately 1 inch square.

fig 1: number of boxes

This is your "playing map" which you will build up on your journey, filling it in to provide a guide of what locations are around you. Some people prefer to use octogons, as they can simulate the 8 compass positions that can be used in adventures (N,S,E,W,NE,SE,NW,SW) - I prefer squares as they are easier to draw.

With a square the top side represents North, the right East, bottom South and left side West. The top right corner is North-East, and so on clock-wise.

After you have prepared a sheet of these, I would suggest photocopying a few, as they may prove to be invaluable for future adventures.

When playing the adventure, you will start off at a location. As you have no idea where this could be in relation to the rest of the locations in the adventure, I normally suggest chosing a "box" in the centre of your page. On this square, write in the top corner the number 1. This number can be used as a reference in any notes you make on your notepad. The next location you visit would be 2, and so on. Also mark off any directions used with a tiny line from the relevant side. (fig 2) Don't mark this direction with an arrow yet, as this is where you can potentially outthink the programmer.

fig 2: mark off lines

Adventure programmers are very devious creatures. They have not only created a world which they intend to baffle you with, filled with a multitude of problems, but they can also throw in problems of other sorts such as a maze (or two).

Mazes can exist in a couple of forms: the classic "real life" maze where locations look alike, and telling one from the other is difficult in the extreme. These can be overcome quite easily with careful mapping. The other type is the "illogical" maze, where travelling out of one location in one direction doesn't necessarily mean the reverse is true. These can also be overcome with careful mapping, it just takes longer sometimes.

Does this sound difficult? Well it is supposed to be! Mazes are fortunately much less common these days. The vast number of adventure programmers have realised that people simply do not like them. However, it is best to be prepared for the "rouge" programmer.

So how do you overcome this "illogical" maze? By mapping each location one at a time, and by using any objects you find as markers, it is possible. Any REASONABLE programmer will, if he has given you a Maze, at least provide an object to "drop" so you can give yourself a reference point. Rather like Hansel's stones in the Hans Anderson fairy tale. If you drop an object, then take an exit leading North and the object is in the new location, then you know that the North exit leads nowhere!

Therefore, if you mark a locations exits with a line, then go in the direction of that exit and test it, you can see if it is a real exit or not. If it is not, then the previous "little line" can be turned into a T shape indicating a "false exit".

If the exit leads into a new location, but doesn't return to the previous one by going in the opposite direction. (IE going East to a new room, then going West, takes you to a different room from the one you started in). Then mark the first room on the map with an arrow. This indicates that the route is one-way only.

Fig 3:"illogical" Maze

A straight forward route is marked with a simple line joining the two locations. An example "illogic" Maze is shown in fig 3.

[illegible]

Each time you find: a character, a problem or an object, make a note on your pad of where you found it. Simply use the same number as used on the map, and then if, later on during a game, you find something that may assist with what you noted, you will know straight away where to go to.

SAVING YOUR POSITION

Most adventures have a "save game" option, where you can save your position to tape. This is VERY advisable, do it regularly, as it may be that during the adventure, you do something that results in your character's "death". Saving your postion at regular intervals will at least give you the advantage of not having to start again from scratch.

It may also be advisable to note any important details of this "save" position on the notepad. Sometime you are asked to type in the name of your position so in this case note this too. (On some occasions where this is

Turn to page 33.

FORMAT'S UTILITY DISC

Reviewed By:- Ken Elston.

Bob Brenchley recently sent me a review copy of the new FORMAT Utility Disc for DISCIPLE and PLUS D users. I had seen the advert in FORMAT and I thought to myself "would anyone want programs on disc they could type in from back-issues of the magazine?"

Well the advert is a little misleading. Yes their are six programs, but they have not all been printed in FORMAT before. Four have been but two are totally new - although based on ideas that have been dealt with in articles over the years. The six programs are:-

TOTAL RECALL
BULK ERASE
SECTOR MAP
FILE COPIER
48K SNAPSHOT POKER
DUAL CATALOGUE FORMATTER.

Total Recall is a utility the recovers erased files from your disc (provided they have not been overwritten by later saves). It does its job without you needing to tell it what type the file is - it works it out all by itself - and I've yet to catch it out.

Bulk Erase is quite a simple program, it did appear in FORMAT many moons ago, but it is still useful. Give it a disc, let is produce a list and then simply answer yes or no when asked if you want to erase that file. Having questioned you on all the files the program then offers you a final chance to abort before doing the business - deleting your files.

Sector Map is a program that will probably only come in useful once in a blue moon. But when you do need it it will be worth its weight in gold. The program give a complete list of every sector used by each file on a disc. It also tells you if the sector count matches the size of the file given in the header, incorrect files should be treated with extreme caution as they have been corrupted in some way.

File Copier does just what its name implies. Any type of file, no hastle, easy to use, and it accepts wild-cards in the match string as well. This, closely followed by Total Recall, is the program I have used most over the past few weeks. It is worth the cost of the disc on its own.

48K Snapshot Poker. An easy to use program that inserts pokes into the disc copy of a Snapshot file. Don't think this is just for games - I've already used it to reset a corrupted basic program that wouldn't allow me to delete a line. Snapping to disc and doing a few pokes with this program was easier than trying to repair the fault while it was still in memory.

Dual Catalogue Formatter. This program, written by Nev Young, has been a favorite of mine for some time. It allows you to have two catalogues per disc, each controlling half the space. All my Spectrum wordprocessing discs have been formatted with this.

Also on the disc is a bonus program called Address Book. It is a simple program for storing names, addresses and a few bits of info on your friends or business contacts. It is not the best program of its type I have seen but as it is free I wont complain. It does have a few nice features which make up for its rather poor editing. Keep going though - you may come to like it after a while.

At £6.95 the disc is good value for money (even if you forget about the Address Book program). It should prove a very popular disc with readers.

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SPECTRUM COMMUNICATIONS

OR WHAT TO DO WITH A BUDGET MODEM

By:- Brian Gaff.

As you probably know, I advertise these modems in this very mag, and a common question I get is "What use are they now that Micronet is dead". Well, although Micronet was the best known on line system, others do exist. The problem is not a shortage of services, but rather a shortage of services that support the 1200/75 baud rate used by the VTX5000!

This situation has come about because the majority of systems these days run on PCs. These machines, and to a large extent, their software, hail from the US, where the V23 (1200/75) baud rate was never popular. However, I have scoured the land and found a fair number of services that you can get onto with the VTX5000.

Before I go into this though, there is another very useful role for the modem. This is what us comms junkies call U2U, or user to user transfer. This basically is the direct transfer of data between users over the phone. The VTX5000 can do this as 1200 baud. The transfers require extra software, and are fully error corrected.

The modem has a ROM on board that allows access to viewdata services. These are very like teletext to look at, but are of course, interactive. The software on ROM is very limited, and to be honest, it is far better to load in a different terminal program.

The other main form of service is the so called scrolling system. This format is being used more and more because it requires little maintenance on behalf of the system operator (important, as many systems are being run as a hobby, and often spare time is limited). One big plus with scrolling systems is that most carry Echomail, an international mail transfer system allowing users of BBs in many countries to read and reply to the same mail. It may take a week to get round, but its free.

Most scrolling systems are 80 columns wide. This is a problem for our Speccy, as the best you can get in readable text is 64 columns. This leads to a certain amount of wrap around, as you can imagine. With care though, you can use these systems. The trick is to tell the system that you only have 18 lines on your screen, and then the top will not scroll off before you have read it!

Lets look at how you actually get on to a couple of real systems, one viewdata, one scrolling. The procedure may vary slightly on different systems, but I have tried to pick two fairly typical ones.

<u>Logging on to Silicon Village</u>
<u>As a guest.</u>

Boot the VTX ROM in, (Reset or OUT 255, 21 from 48K Basic) press a key, and then BREAK in at the menu. Type RUN and press Enter. [This little apparently futile procedure gets around a bug in the ROM that means you cannot go directly into terminal mode without the letters sent out being scrambled!]

Now make sure the slide switch is in the Mnet position, and the line switch is up. Dial the Silicon Village access number.(081 759 6996). When you hear a tone on the line, switch the line switch down, replace the phone, and key 1 from the menu. If all is well, a JCCNET caption should appear. All that you need to do now is to keep keying 4, until the screen changes, and you are into the demo area.

Silicon Village is a subscription service, and can work out quite

costly, even though it offers local call access. I am afraid nothing is for nothing in this world! There is a £10 registration fee, with a £6 a month charge that allows you 2 hours a month of free access, thereafter all access is charged at 2.5p a minute. The Demo is free though! To get off most viewdata systems, like this one, you key *90#. Note that on the ROM software, * is on the symbol shift key, and ENTER is the hash.

Logging onto Infotel
A scrolling system.

For this you need different software. There are two terminals capable of this on my PD Tape 1. One is Firescroll, the other Specterm 6. Both have 64 column screens, but the latter has downloading capabilities. For the purposes of this demonstration, I will use Specterm 6.

Load Specterm 6 and select option 0, terminal mode. Leave the switch set to Mnet, and make sure the line switch is up, as before. Dial the number, (0737 766 027) and wait for the tone. Listen for the second distinct tone, then push the line switch down, and replace the phone. After a brief pause, you should get this on screen.

```
**EMSI REQA77X
FrontDoor 2.02: noncommercial version
Press Escape twice for RA 1.11
```

(You just wait here, and soon....)

```
>> INFOTEL BBS - Redhill - V21/22/23/22bis <<
>>>      Serving the online community      <<<
>>>     24 Hours a Day, 7 days a week      <<<
>>>  Supporting PC PCW, CPC, CP/M, AMIGA   <<<
>>>              SPECTRUM                  <<
>>>          SysOp. Bob Garbutt            <
FIDONET 2 255 40   FREKNET 42:100 206
CLARINET II 9200 13
BBS Number 0737-766027
Voice Number 0737-7619.1
System running on a 386sx PC purchased from
Simply Computers LTD - Tel. 081 523-4020
Modem Amstrad SM2400
```

```
**EMS. IRQ8E08

NemoteAccess . ..
Please enter your first and last name  Test Login
```

(Put your name here, not Test Login!)

```
Scanning user f. e

Available languages

    1  . . english 2 ..... dutch
    3 ..... german 4 ..... french

Select your preferred language: 1

Your name was not located in the system user
file.

Name entered. Test Login.

Did you enter your name correctly [Y/n]? Yes

Would you like ANSI colour and graphics [Y/n]? No

Do you want to use the ANSI full screen editor
[Y/n]? No

Would you like AVATAR codes to be sent [y/N]? No

Would you like hot-keyed menus [Y/n]? Yes

How many lines does your display have (10-66, 24
recommended) 18

Would you like to pause after each screen page
[Y n]? Yes

Where are you calling from? London

Please enter your date of birth
[DD MM-YY] 15 12 50

Please Enter your password to use *****

Please re-enter for verification: *****

Did you enter all the above information correctly
[Y n ? Yes
```

Well, that is the main logon sequence. Note that you must NOT answer Yes to the Ansi or Avatar questions, as the screen would then become unreadable! Hot keys are simply single key selections from menus. If you answered No to this, you would have to key ENTER after each

selection. By the way, whereas Viewdata uses 7 data bits, 1 stop bit, and even parity, scrolling systems tend to have 8 data bits, 1 stop bit, and no parity. This is why the viewdata terminal won't work on scrolling BBs.

Most BBs will at this point force any new users into a more detailed questionnaire. You may feel this is rather draconian, but with all the bad press BBs have had, most are now very careful!

Once into the system, you will find that after a few screens of text, you will be into the main menu.

```
INFOTEL BBS MAIN MENU

[F]iles Menu          [A]dverts (post & read)
[M]essage Menu        [H]elp
[D]oors Menu          [T]own Cryer (Bulletins)
[U]tilities Menu      [O]ffline Msg Readers
[C]onfig Menu         [W]all?
[S]tatistics Menu     [I]nfotel Facts
[Y]ell Sysop          [B]BS List - you update it
[Q]uit/logoff          P]ost a Message to Sysop

Please Select Option:
```

I don't think this needs much explanation! As I said, certain parts will be in 80 column, like the messaging system, so the display will get a bit messy. Its over to you now, here are a few BBs for you to try.

Format:-
- BB name, type etc. [Key - see below]
- Location
- Sysop
- Max Speed
- Other Info

Key:-
- Sp - Spectrum area
- S - Scrolling
- V - Viewdata
- Rb - Ringback, let phone ring once, then hang up and redial.
- R - Restricted hours
- Su - Subscription service

Speedlink [V,Su]
London
Faber Enterprises
081-5440155
2400
Login Key 1, then 4444444444 4444

The Silicon Village [V,Sp,Su]
Reading - London
TSV Ltd
0734-819000 or 081-7596996
Login as 4444444444 4444 (Demo and BACC area)

Tessier Ashpool Online [V,Su]
London
Tessier Ashpool
071-2759996
2400
Login with XMNET then HELP and follow prompts

The Animation Station [V,Su,Rb,weekdays]
Epsom
Dugald Holmes
0372-743809
1200/75
Login with real name and fill out questionnaire

Prestel [Su]
[illegible]
BT Tymenet Europe
071-6181111
Login as 4444444444 4444

Shades (On-Line Game) [S]
London
Tessier Ashpool
071-2759996
2400
Type SHADES at prompt, to login. Use Firescroll to access - set to 7 bits, 1 stop bit and even parity.

TF Services [S,Sp]
London
Toony
071-7062379
2400

Aspects [S,Sp]
Manchester
Dave Gorski
061-792-0260
2400

Maktronics [S]
Manchester
Paul Heywood
061-773-7739
2400

Grizzilius Maximus [S]
Preston
Colin Adams
0772-828975
9600

Infotel [S,Sp]
Redhill
0737-761911
Bob Garbutt
2400

White Rose [S]
Somerset
Nigel Beaumont
0274-851027
9600
V32

More Summer Wine V23-V32 [S]
Somerset
Nigel Beaumont
0274-851027
9600
V32

The Owl Service [S,
Leeds
Malcolm Arnold
0532-605876
2400
[redacted]

Transylvania Express [S]
Bradford
Marcus Waterworth
0274-621668
2400

Selebia BBS [S]
Selby
Peter Gallagher
0757-213215
9600
V32b,V42b

Moon Moth [S]
Bromley
Bill Welch
081-777-9730
2400

GABBS [S,
Gosport
Stephen Cole
0705 524805
9600
MNP V32b

Advanceus Maximus [S]
Hull
Eric Sparrow
0482-586285
9600
MNP

Komputer Knowledge 2 [S]
Princes Risborough UK
Andrew Eaves
0296-668.41
2400

Poacher Opus [S]
Grantham
Mel Warwick
0476-62450
2400

DTP User [S]
Croydon
Steve Dick
081-656-5190
9600
V32b,V42b

Fourth Dimension BBs [S,Sp,R]
Poole
Wayne Weedon
0202-600305 (9pm-6pm ONLY!)
2400

All the above were tested at V23, but I cannot guarantee they will always support this speed.

>>>>>>>> O <<<<<<<<

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PFN-PRINT

Reviewed By:- Carol Brooksbank.

This is an ingenious program for producing proportional print text on the Spectrum screen in a variety of attractive fonts - 8 are supplied with the program.

The full package, priced at £4, consists of a font Editor plus the printing program, though those who are content with the author's eight fonts can purchase the printing program separately which costs only £1 and is public domain.

The printing program consists of a short BASIC program, starting at line 9860. The fonts are machine code files embedded in REM lines. To make use of them, you load the BASIC and add your own BASIC lines to select the fonts and print the text on screen.

These are not ordinary Spectrum fonts on an 8x8 matrix, and you cannot load them and type directly to screen. They can only be used by PRINT #4,AT statements.

The co-ordinates which follow AT are actually y-x pixel co-ordinates, which threw me at first. I expected AT 0,0; to be the top left corner of the screen, whereas it is the bottom left. AT 176,0; is the top left.

Because the printing is proportional, and individual letters may be up to 16x16 pixels, the length of the string you enter for printing bears no resemblance to the number of character squares in the screen, so if a word splits in the middle, simply typing in a few spaces to move the rest of it onto the next line does not work. It is easier to end the string at a line break and use another PRINT #4;AT statement and another string for the rest. The letters can play havoc with attributes as one letter can occupy bits of several colour cells.

You need to follow the handbook instructions about the order in which subroutines are called and the setting up of variables very carefully. Get it wrong and the program crashes and corrupts the BASIC.

Once you get the hang of it, the program is easy to use and the fonts are very attractive. All type can be printed single or double height, and some of the fonts include graphics, though you are left to work out for yourself which symbols would produce them. Fig. 1 below shows them in action.

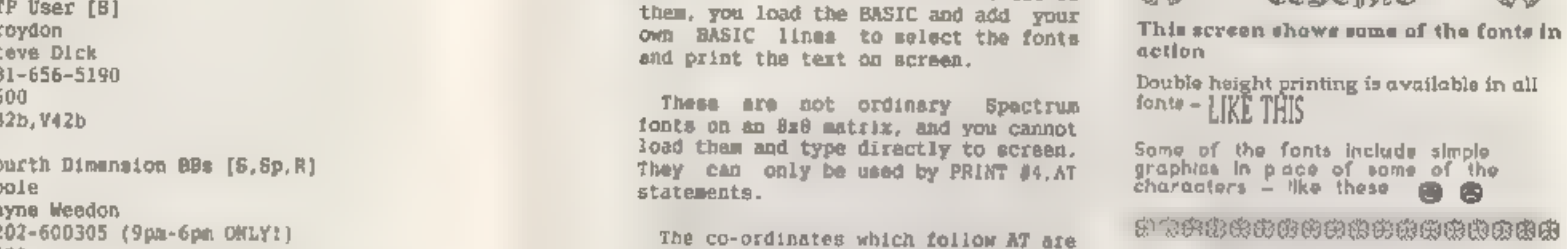


Fig. 1. Sample Screen Output.

Here is the BASIC program which produced it, because of the presence of machine code in the REM lines, the program will not LLIST beyond line 9881. Therefore the subroutines which do the work are not listed.

```
10 GOSUB 9900
20 LET font=5: GOSUB 9880
30 PRINT #4; AT 170,75;"TESTING"
40 LET font=8: GOSUB 9880
50 PRINT #4; AT 170,0;"! "; AT 170,2
   .0,"! "
60 LET font=6: GOSUB 9880
70 PRINT #4; AT 145,0;"This screen s
   hows some of the fonts in action"
80 LET font=7: GOSUB 9880
90 PRINT #4: AT 110,0;"Double height
    printing is available in all"; A
```

```
T 97,0;"fonts -  LIKE THIS "
 100  LET font=2: GOSUB 9880
 110 PRINT #4; AT 65,0;"Some of the fo
     nts include simple"; AT 53,0; "gr
     aphics in place of some of the ";
      AT 41,0;"characters - like these
       [ ]"
 120 LET font=8: GOSUB 9880
 130 PRINT #4; AT 20,0;"[[[[[[[[[[[[[[
     [[["
9000 STOP
9860 REM PFN print system          by Ga
     ry Rowland. All following code pl
     aced in the public domain. Delete
      REMs not required.
9870 REM Select font (9881-9888)
9880 RESTORE 9880+font: LET f=13+PEEK
     23639+256*PEEK 23640: RETURN
9881 REM font 1
```

The Font Editor is a very capable program, with all the features you would expect for creating and modifying fonts. One noval feature is a "slice" capability. You can move any of the 16 possible horisontal rows of dots in a letter to the left or right. It makes creating italic fonts from upright ones very easy - you simply move the slices by varying amounts to the right. The spacing between letters and the overall depth of a line are user-definable, and you can grab one letter, modify it and replace it as another - very time saving for creating E and F with the minimum amount of work. Fig. 2 shows the Editor working screen. Keyboard, joystick or mouse control may be selected.

The fonts are saved as code blocks, which may be used in the normal way, provided your BASIC program puts the font address into the right variable when required. The author suggests REM statements as suitable places for the font code, but as the files may be anything between 900 and 2000 bytes long, he must have more patience than I for typing in the necessary 1-space-per-byte you need to prepare a REM line for a code block! I prefer ordinary above-RAMTOP locations for any new fonts which he has not already stored in REM lines for me.

The program comes on tape, and works with any Spectrum in 48K mode. The tape I received was rather under-

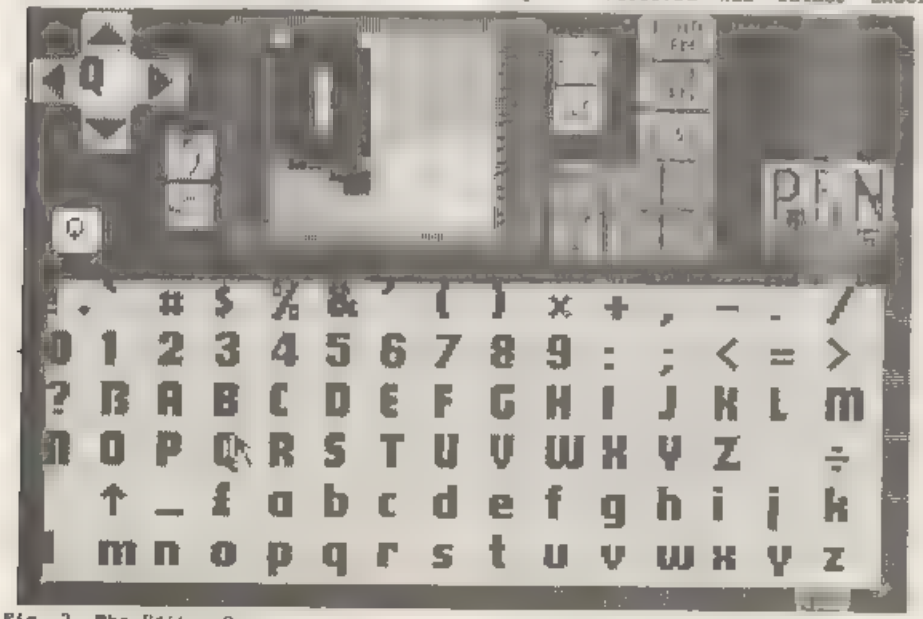


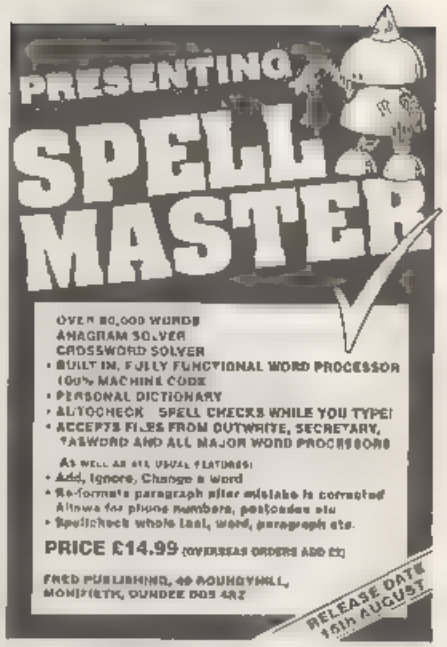
Fig. 2. The Editor Screen.

recorded, and would not load on my +2. I had to load it into the +3, using a recorder with variable volume control and re-record it onto another tape before I could get it into the +2 and onto PLUS D disc. Conversion is very simple, with full instructions in the handbook. SAM Coupé users will be pleased to know that it also runs without any fiddling about at all under SPECMAKER, and would probably run under the other emulators too, though I have not actually tried it on any others.

The handbook tells you all you need to know, and on the review tape there were a couple of fullscale programs (also Public Domain) using the system. One would not load and I could not be bothered with the +3 business again, but the other was an educational program which tests your spelling. The print system made the program presentation very attractive, so this system is not just for producing pretty screens for fun - it can be used to good effect in other programs.

At Public Domain prices it is good value for money, but you may have some difficulty in loading it unless you have a good quality data recorder.

PFN Print System. Public Domain - obtainable from the author Gary Rowland, PO Box 49, Dagenham, RM9 5NY. Price £4 for EDITOR and PFN PRINT, £1 PFN PRINT only.



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MACHINE CODE WITHOUT THE TEARS

Part 12.

By:- Carol Brooksbank.

How did you get on with writing NXUP? Here is how it should be. We don't need it in this program, but it is useful to add it to your library.

```
NXUP    RL H
        RL H
        RL H
        LD BC,32
        SBC HL,BC
        RR H
        RR H
        RR H
        RET
```

Don't worry if you do not understand exactly how these subroutines which find a neighbouring colour cell or the correct attribute byte work. The logic of binary arithmetic is not easy, and you can simply take it on trust that they do work without taxing your brain to fathom out why.

In our present program we need not have used NXCELL and LASTCELL for moving across the sprite frame because we are always moving within the same line of bytes. INC HL and DEC HL would have done the trick. But I want you to get into the habit of using the subroutines, because if you need to move from the last cell in the line to the corresponding byte in the first cell of the next row, INC and DEC will let you down if you move into another 'third' of the screen. If your first instinct is always to use NXCELL and LASTCELL you will not go wrong.

Similarly, you can move up and down in cell-size jumps by adding or subtracting 32 to the value in HL, so long as you stay within one third of the screen. If you are in the habit of using NXDOWN and NXUP you will have no problems even if you stray over a third boundary. But the option of using the shorter forms is always there if you are certain you will not be moving into another screen third.

Now back to our sprite moving activities.

```
MOVESPR  PUSH HL
         LD B,3
SPRLOOP  PUSH BC
         PUSH HL
         CALL ROWRT
         POP HL
         CALL NXDOWN
         POP BC
         DJNZ SPRLOOP
         POP HL
         INC
```

This little subroutine calls the one we wrote last month to scroll all three rows of cells one pixel to the right. It is called with the top left byte of the sprite frame in HL, and this is preserved at the start

The loop repeats three times because this sprite is three cells deep. At the start of each loop the top left byte of the row is saved, and retrieved after ROWRT has been called. NXDOWN is used to move to the next row of cells in the sprite, the counter is retrieved, and we loop back if there are any rows left to do. If not, the frame reference byte is recovered and the routine exits.

```
ONESTEP  LD B,8
STEPLOOP PUSH BC
         CALL MOVESPR
         POP BC
         DJNZ STEPLOOP
         RET
```

This little routine calls the previous one 8 times, moving the whole sprite right by 8, so that it occupies the right hand 6 columns of its frame, with the first frame empty.

Those are the new subroutines we

need to move our sprite. When you have written them and saved your source code, load the source code for the tractor drawing program into your assembler and we will modify it to make the new program.

First we must change the values of COLUMN and ROW, because 9,9 placed the tractor in centre screen, and we must start at the left. COLUMN must be 0, but ROW can be anything between 0 and 20, depending how far down the screen you want your tractor to be. After the lines setting up COLUMN and ROW, add another line:

```
ATTRIBS  EQU 22528 (Spectrum users)
ATTRIBS  EQU 38912 (Sam users)
```

You remember that we saw last month that it is impractical to have the tractor and trailer in different colors if we want to move the sprite, so we must now delete all the lines which set the attributes

Your assembler handbook will explain how you go about deleting blocks of lines Those assemblers which use line numbers usually have some command like DELETE nnnn,nnnn. The exact syntax will vary. Those without line numbers in the source code usually have some method of marking the block, or some require you to place the cursor at the start of the block and specify the number of lines from the cursor to be deleted.

The first block we have to delete just in the program's main loop. Just above the label ATTRLOOP are two lines:-

```
        POP HL
        LD B,3
```

The POP HL is the first line of the block. Don't worry that we are leaving an unbalanced stack - we shall be writing some new lines later which will be taken care of.

The last line of our block is just above the start of the library subroutines, and is the command.-

```
        DJNZ ATTRLOOP
```

If you delete that block correctly, Spectrum users will have the following lines just before the library routines:-

```
        DJNZ CELLOOP
        RET
```

Sam users will have

```
        DJNZ CELLOOP
        CALL $CREENOUT
        RET
```

You should also delete the library routine FINDATTR which we are no longer using. Now save a copy of the remaining source code before we add to it, because we shall be using this part again in another modification next month.

The lines we are going to write now are to be inserted in the main loop in place of the ones you deleted, and they will start immediately after DJNZ CELLOOP Again, you must check your assembler handbook to discover how to insert lines. Some require you to insert a blank line and then write on it for each line. Some have an insert mode which keeps inserting new lines as long as you stay in that mode.

```
SETATTR  LD HL,ATTRIBS
         LD (HL),%01100000
         LD DE,ATTRIBS+1
         LD BC,767
         LDIR
```

We are going to use BRIGHT 1, PAPER 6 (green) INK 0 (black) over the whole screen, so we need to set each of the 768 attribute bytes to BIN 01100000 immediately after drawing the tractor. We could have done it before drawing the tractor, and purists would prefer that, but this way means we can keep all the new lines together which makes it easier for you to insert them. And when it appears on screen it will all happen far too fast for anyone to tell which way round it was done.

```
         POP HL
         LD B,26
MOVELOOP PUSH BC
         PUSH HL
         CALL ONESTEP
         POP HL
         CALL NXCELL
         POP BC
         DJNZ MOVELOOP
```

You remember that we saw last month that we need to move the sprite over 26 cells to move it from one side of the screen to the other. This is the loop which does that. It calls ONESTEP to move the bits of the sprite to the right of the frame, and then calls NXCELL to move the frame reference byte across 1 byte. The first POP HL is the one which replaces the one in the block of lines we deleted. It retrieves the top left byte of the sprite's starting position.

You should have a RET following these lines, left over from the original program after we deleted the block. Sam users have:-

```
        CALL $CREENOUT
        RET
```

Now add at the end of the program, just above END EQU $, the subroutines which we wrote this month and last

```
        ROWRT
        MOVESPR
        ONESTEP
```

You now have a complete new program, so save the source code under a new name. You may have to rename it if your assembler automatically saves new versions under the same name as before, to avoid overwriting your original program on disc or microdrive.

Assemble it, save your code and use the symbol table to find the address of START. It should be the same as the START address of the original program so long as you have not been moving things around. The beauty of using an assembler is that if it seems clearer to you to have all the subroutines at the beginning and the main loop, running from TRACBYTES to the RET after the part we have just written, at the end, there is nothing to stop you rearranging things like that. The symbol table will always give you the calling address if you label the START. Keep END EQU 0 and LENGTH EQU END- at the very end. The label which finishes off the last instruction must be the label immediately after ORG at the very beginning of the program.

After saving your object code, reset your computer, enter CLEAR 31999 and load your code to 32000. Call it from your START address and the tractor will move across the screen from left to right and stop when it reaches the right hand side.

You will need to use CLS before running it again, or you will create a second tractor and trailer with its nose against the back of the first. I am sure you can work out why.

So now we have the tractor moving, but what about its speed? It runs across the screen fairly quickly - on Sam it is very fast because Sam's chip is much faster working than the Spectrum s. How do we slow it down? We write another subroutine and insert it just above END EQU $. It will also make a useful library routine to add to your growing collection.

```
SPEED    DB 50

SLOWIT   PUSH AF
         PUSH BC
         LD A,(SPEED)
         AND A
         JR Z,SLOWEXIT
         LD B,A
TIMER    NOP
         DJNZ TIMER
SLOWEXIT POP BC
         POP AF
         RET
```

This routine is called from SLOWIT. The value at SPEED is a figure we can poke from BASIC to change the speed - the higher the number the slower the speed of our tractor.

The routine begins by saving the registers it is going to use so that nothing in the main program is corrupted. The A register is loaded with the value of SPEED, and checked

by AND A. If it is zero, it goes straight to the exit sequence without slowing the movement perceptibly. This is because we shall usually be poking the speed value from BASIC, and we may not always want to slow the movement at all.

If the value is not zero, it is copied to B and becomes a loop counter. The instruction at TIMER, NOP, is NoOPeration - meaning do absolutely nothing. So what is the point of it? In this little routine the point is that it takes time for the processor to keep decrementing the counter and looping back to the NOP instruction, even though it does nothing when it gets there. So we are making the program hang about and do nothing for a few fractions of a second, effectively slowing the action down

So from where in our program shall we call this subroutine to slow the movement of the tractor down without making things jerky? If the movement is to be smooth, the subroutine should be called after each line of the sprite has been moved one pixel to the right. So we must insert it in the subroutine ROWRT. The best place for it is just before the subroutine loops back to do another line of bytes. At the end of the subroutine, just a couple of lines before RET, is the command DJNZ FIXLOOP. Insert:-

```
CALL SLOWIT
```

immediately above that command, below INC H.

Now, re-save your source code, re-assemble it and save the object code. From the symbol table, make a note of the address of SPEED. When you load and run your new object code the tractor will move more slowly. Experiment by poking different values into SPEED, clearing the screen and calling the routine again. The highest value you can poke is 255, of course, because SPEED is a single byte variable.

If we wanted to slow things down even more, we could use BC as a counter for the loop, so that we could have a counter up to 65535. But then, you cannot use DJNZ to check the counter and loop back, because it will only check B.

If we are using BC as a counter, we have to check it by using the form:

```
LD A,B
OR C
DEC BC
JR NZ,label
```

Only if both A and C are at zero will OR C set the zero flag, and DEC BC does not affect the zero flag, even if it results in BC holding zero, so the check will work properly.

Next month, we are going to start thinking about making the tractor disappear off the right end of the screen instead of crashing into the border, and also about making it reappear on the left as it goes off at the right. The key will be that, instead of thinking of the tractor frame as just 7 cells wide, we shall think of it as the whole width of the screen - 32 cells.

We shall still use parts of our original tractor drawing program, but the scrolling routines will be new ones

Meanwhile, why don't you try writing a routine to make the tractor reverse across the screen to its original position? I am not going to tell you how I would do it this time, because you need some practice now at writing your own original routines. It will not be too difficult - you just have to reverse what we have done in this one. Don't worry if it all goes wrong at first, or if it crashes (not the tractor, the program). Just remember to save everything and take the disc out of the drive before you try it. And persevere till you get it right. If it is any comfort to you, all these versions of the tractor program crashed the first time I tried them out. Very few programmers get things right first time and I am certainly not one of them. Good luck!

DISC-PROCS

ADDING NEW FEATURES TO DOS ON SAM.

By:- Stephen Thornhill.

This article is not really about a program, more a series of routines for adding simple New Commands as procedures using DEF PROC.

I have listed 15 Commands designed to be an extention to the SAM Coupé's DOS. Most of these are DIR extentions... (n=number, $=string, v$=Variable string)

DIR_TYPE n Shows the Directory of the disc showing only the ones which are the same TYPE controlled by 'n' where n is 5 for a Snapshot, 16-BASIC, 17-Numeric Array, 18-$tring Array, 19-Code File, 20-Screen$. Others produce different results which are not documented in the technical manual. The information for the type of each file is stated in the User File Information Area (UFIA) byte 0 when you access a file from machine code or the DIR byte 0 for even files and 256 for odd files, in the form Bit 6&7 = Status, bits 1 to 5 = Type.

DIR OVER Shows a short directory of all files on the disc including Hidden files. It does this by ignoring the status flag (UFIA byte 0).

DIR STR v$ This stores the DIR of the disc in the variable 'v$'. This is accomplished by using KEYIN.

DIR_TRK tr This will show a directory of a certain track.

DIR_PROG t,s This shows all the information except the sector address map of the program stated by trk & sct This is done by READing t,s then FULL_DIR...

DIR FREE This produces the variable 'discfree' by simply Jumping to DIR_STR and slicing the last part.

DIR ALLTYPES Goes through the directory sorting it into the separate areas. It does this by setting up a loop which goes through the numbers and jumping to DIR_TYPE.

FN locate This locates the starting address of the Disc Operating System from the formula: PEEK $VAR 450*16384+16384. Where peek $VAR 450 contains the page of DOS. Therefore the page times 16K(1 page)+16K (so that it counts page 0)=start

FN Type$(n) This equals the Type of file given in 'n'. This also includes the undocumented names. (I presume these are if a PLUS D disc is read. Does anyone know what SPECIAL is?)

FN status(n) Takes UFIA byte 0 and Bit-wise ANDs it with 192. This Produces the Protection/Hidden Status.

PRESENT x$ Creates a variable 'present' with a value of 1 if 'x$' is present on the current disc or 0 if not.

FULL_DIR Gives all the information stored in the Directory except for the Sector Address Map for each file.

This Terminates the list of extended DIR commands... The next set are about Reading or Writing to the disc.

LOAD SECTOR dr,trk,sct,addr This command operates in exactly the same way as the SAMDOS command READ AT dr,trk,act,addr except for the fact that any address can be used (0-528K), not the usual 64K address range.

LOAD TRACK dr,trk,addr This calls the last command ten times over to read all sectors on the specified track. Again the full address range is usable.

SAVE_SECTOR dr,trk,sct,addr This

commands operates as WRITE AT dr,trk,sct,addr but as with LOAD_SECTOR the user can access the full address range. (0-528K)

SAVE_TRACK dr,trk,addr This command operates like LOAD_TRACK except writes to the disc surface. NOTE: It is advisable not to write data onto trks 0, 1, 2, 3 as these contain the directory.

The Final command is really just a small touch to allow you to renumber the procedures to fit your own programs.

RENUMDOS n where n is the starting line number. It will renumber the procedures with a step of 1. Notice the LABEL command on the first line to calculate the starting line number.

So, that's the explanation, now here is the listing:-

```
10 LABEL NEWDOSCOMS: REM DIR_comman
   ds
11 DEF PROC DIR_TYPE z
12 LOCAL a,b
13 FOR a=0 TO 3: FOR b=1 TO 10
14 READ AT 1,a,b,16384: IF PEEK 163
   84=z THEN PRINT MEM$(16385 TO 16
   394),
15 IF PEEK 16640=z THEN PRINT MEM$(
   16641 TO 16650),
16 NEXT b: NEXT a: END PROC
17 DEF PROC DIR_OVER
18 LOCAL a,b
19 FOR a=0 TO 3: FOR b=1 TO 10
20 READ AT 1,a,b,16384: PRINT MEM$(
   16385 TO 16394),MEM$(16641 TO 16
   650)
21 NEXT b: NEXT a: END PROC
22 DEF PROC DIR_STR rubbish$: CLOSE
    R#4: OPEN R#4;"$"
23 KEYIN STR$ (NEWDOSCOMS+14)+"RECO
   RD TO "+rubbish$
24 RECORD TO z$
25 RECORD STOP
26 DIR R#4;1
27 END PROC
28 DEF PROC RENUMDOS L
29 RENUM NEWDOSCOMS TO NEWDOSCOMS+1
   000 LINE L STEP 1
30 END PROC
31 DEF PROC PRESENT Z$
32 LOCAL a,b: LET present=0
33 FOR a=0 TO 3: FOR b=1 TO 10: REA
   D AT 1,a,b,16384
34 IF z$=MEM$(16385 TO 16384+LEN z$
   ) OR z$=MEM$(16641 TO 16640+LEN
   z$) THEN LET present=1
35 NEXT b: NEXT a: END PROC
36 DEF FN locate=PEEK SVAR 450+1638
   4+16384
37 DEF PROC DIR_TRK t
38 FOR b=1 TO 10: READ AT 1,t,b,163
   84: PRINT MEM$(16385 TO 16394),M
   EM$(16641 TO 16650): NEXT b: END
    PROC
39 DEF PROC FULL_DIR
40 LOCAL a,b,prog,z
41 LET prog=1: FOR a=0 TO 3: FOR b=
   1 TO 10: READ AT 1,a,b,16384: GO
   SUB 42: LET prog=prog+1: PAUSE :
    CLS : POKE 16384,MEM$(16640 TO
   16896): GOSUB 42: LET prog=prog+
   1: PAUSE : CLS : NEXT b: NEXT a:
    END PROC
42 PRINT '"      SAMDOS EXTENDED D
   IRECTORY"'
43 PRINT "Program:",prog
44 PRINT "TYPE:",;FN type$(PEEK 163
   84 BAND 63)
45 PRINT "NAME:",MEM$(16385 TO 1639
   4)
46 PRINT "No. OF SECTORS:",DPEEK 16
   395
47 PRINT "Starting TRK No.:",PEEK 1
   6396
48 PRINT "Starting SCT No.:",PEEK 1
   6397
49 PRINT "MGT Notes:"': FOR z=0 TO
   9: PRINT z;"-";PEEK (16594+z); T
   AB 7;(CHR$ PEEK (16594+z) AND PE
   EK (16594+z)>31): NEXT z
50 PRINT "MGT FLAGS:",BIN$ PEEK 166
   04
51 PRINT "ARRAY LENGTH:",DPEEK 1660
   5'"SCREEN MODE:",PEEK 16607'"BAS
   IC LEN+VARS:",DPEEK 16614
52 PRINT "SPARE BYTES:";PEEK 16616;
   ",";PEEK 16617;",";PEEK 16618;",
   ";PEEK 16619
53 PRINT "Starting Page Number:",PE
   EK 16620 BAND 31
54 PRINT "Page Offset:",DPEEK 16621
55 PRINT "No. of Pages:",PEEK 16623
56 PRINT "Length MOD 16384:",DPEEK
   16624
57 PRINT "Exec Addr/Autorun:",DPEEK
    16626
58 PRINT "Spare Bytes:": FOR z=0 TO
    7: PRINT z;"-";PEEK (16628+z);
   TAB 10;(CHR$ PEEK (16628+z) AND
   PEEK (16628+z)>31): NEXT z
59 PRINT "FUTURE USE:",PEEK 16638;"
   ,";PEEK 16639
60 RETURN
61 DEF FN type$(q)=("ZX BASIC" AND
   q=1)+("ZX N.ARRAY" AND q=2)+("ZX
    $.ARRAY" AND q=3)+("ZX 0,0" AND
    q=4)+("48K SNAP" AND q=5)+("M.D
   . FILE" AND q=6)+("ZX SCR$" AND
   q=7)+("SPECIAL" AND q=8)+("128K
   SNAP" AND q=9)+("OPENTYPE" AND q
   =10)+("M/A EXECUTE" AND q=11)+("
   BASIC" AND q=16)+("Numeric Array
   " AND q=17)+("String Array" AND
   q=18)+("Code file" AND q=19)+("S
   creen file" AND q=20)
62 DEF FN status(q)=q BAND BIN 1100
   0000
63 DEF PROC DIR_PROG t,s
64 READ AT 1,t,s,16384
65 GOSUB 44: END PROC
66 DEF PROC DIR_FREE
67 LOCAL z$
68 dir_str "z$"
69 LET discfree=VAL z$(LEN z$-4 TO
   LEN z$-1)
70 END PROC : REM LOAD_commands
71 DEF PROC LOAD_SECTOR d,t,s,addr
72 READ AT d,t,s,16384: POKE addr,M
   EM$(16384 TO 16896)
73 END PROC
74 DEF PROC LOAD_TRACK d,t,addr
75 LOCAL s
76 FOR s=1 TO 10:load_sector d,t,s,
   addr: LET addr=addr+512: NEXT s:
    END PROC
77 REM SAVE_commands
78 DEF PROC SAVE_SECTOR d,t,s,addr
79 POKE 16384,MEM$(addr TO addr+512
   ): WRITE AT d,t,s,16384
80 END PROC
81 DEF PROC SAVE_TRK d,t,addr
82 FOR s=1 TO 10:save_sector d,t,s,
   addr: LET addr=addr+512: NEXT s:
    END PROC
```

I hope this article will give you some idea of how to develop extra commands using DEF PROC. I know some of the extra features I've produced already exist in MasterDOS but there are still times when you may want to use SAMDOS (as part of a PD program let's say). It is also nice to be able to do things your own way.

I look forward to seeing more procedures from other readers.

Continued from page 16.

not true, a tape counter can come in useful, so note your counter number also.)

Some adventures also feature a 'RAM save' facility which will keep a position in memory. This can be useful for certain 'live or die' situations. IE crossing a rickety bridge with a heavy load of treasure - will the bridge break or not?

I hope this will help you in getting started. But, so you have something to work with, I would like to suggested a title for you to try. Colin Jordan's adventure: Enid Blyton's "Five On A Treasure Island". This title is available for SAM, Spectrum 48k and 128k computers. (The difference between the versions is mainly graphical). Despite the subject matter, this is an ideal first adventure to tackle, as most of the problems are relatively easy to solve (if you think about them). The Spectrum version is apparently now available on the "cover tape" of August's Your Sinclair magazine.

Please write to Format with your views on this section, or ideas for further areas to cover. I need your support!

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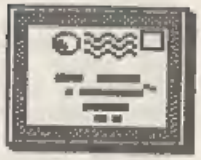

Dear Editor,

I would like to say thank you to "FORMAT" it is "Good reading", and value for money (LONG LIVE FORMAT).

In the June issue of FORMAT, Vol.5 No.10, I was interested in the program Disc Doc, by Colin Wright.

I have a PLUS D, but it is not fitted with the UNI-DOS system ROM, because I have tried typing in the program and the computer will not let me enter the line, 105 LINE 1000: LET P=0.

Will I have to obtain the UNI-DOS system, or can Colin Wright do a version for the PLUS D system with G+DOS 2a?

Please can you let me know, what can be done. [By the way I do not have much experience in programming].

Yours sincerely, Mr F.J.Perry.

Sorry Mr Perry but that program does need UNI-DOS, it would need machine code routines to be written to get it working under G+DOS. My recommendation would be to follow the growing majority and upgrade your system. Ed.

Dear Editor,

Recently I found that, by default, a subscription of mine to a fellow magazine had run out.

I don't want that to happen with FORMAT and will be obliged if you will note for me the month of the LAST issue covered by my present subscription.

Yours sincerely, Dr T.Wilson.

We do send reminders when renewals are due Dr Wilson, however you can tell by looking at the label we use to send you FORMAT each month. The top line contains your membership number, your expiry date, and a sort code that we use. Let's say the date was shown as 1192, then your membership would expire at the end of November 1992 (or with the mailing of the December issue of FORMAT - which ever way you want to look at it). Ed.

Dear Editor,

I recently wrote a letter to the SAM Newsdisc which got me thinking about FORMAT and the new GameStar pack. Below is part of the letter about the GameStar.

Something that I have to say about the GameStar. It will attract new users who may not know what a disc drive is, never mind it's benefits. They will probably be more concerned with cost. Once they learn about their computer they will discover what a bonus a disc drive is and will probably buy one. As long as tape software (which I agree will be difficult) and an alternative to the Newsdisc is available to them, and if paper magazines (eg FORMAT) teach these absolute beginners, I can see no problems. Those who know a bit about computers will know that the standard SAM is what they want, and can still buy it.

Imagine a young child slowly saving for his/her first computer, or parents or even a pensioner buying a computer, none of which know what BASIC or a word processor is, never mind that you can emulate C64 on Amigas. If there is a GameStar available in the shop they will see it as one of the cheaper ones that can be upgraded to one of the more expensive ones (in simple terms). If there was just a £200 SAM the sales person would be likely to recommend that they spend more on an ST or Amiga, or if they can't spend that much, a C64 or console. Which is better from the current SAM users' point of view, a new GameStar owner who is likely to later buy a disc drive, or a new C64 or ST owner?

What other computer is such good value and potentially powerful for the

absolute beginner?

Similarly, Speccy owners are changing computers because there is not enough software coming out for them (July 92 YS reviewed just five new Speccy releases). Many of them would consider SAM but by the time they've saved £200 they may as well save £100 more and buy the basic ST, that is if they haven't bought a console first.

I thought that since most of the new users will become associate members, they would probably end up subscribing to FORMAT. I remember when I was new to computers (I was seven when I started on an Acorn Electron), a magazine such as FORMAT would have been impossible to follow. A separate beginners FORMAT would be perfect, doing the same for newcomers as FORMAT does for the more experienced user.

I would like to help. I have always wanted to contribute to FORMAT in some way but I didn't think I have anything special to offer. After nine years of teaching myself BASIC I think I could confidently write an absolute beginners BASIC series. I have just finished my GCSE's and have two months spare before I go back in September. I'm sure I could get a good start during this time. If you are interested in my ideas and my proposal then please contact me.

As well as teaching BASIC, a beginners FORMAT could also teach other things that we all take for granted. What is a disk drive? FORMAT could show new users how to use one, and it's benefits. How to load and Save on tapes (when I first started I typed all my programs in every time I wanted to see them, and copied them to paper, load and save was nearer the back of the manual, but that was when I was young and daft). What is a word processor, printer, utility, interface, a beginners help page (very important) etc. News and the editorial could be copied from the normal FORMAT if they're not too difficult for the beginner to understand. The sort of thing I am talking about is the sort of magazine I wish I'd had when I started with computers.

I have written a personal view of the SAMCo mouse, if you are interested, although I expect you will have had hundreds since you asked in the June letters page. I could also review Batz 'n' Balls and Craft if you are interested for your games supplement.

Yours sincerely, David Finch.

Well David, quite a lot for people to think about there. I agree with your sentiments on the GameStar package and I'm sure it will be available soon.

I would also like to see what you have to offer on the Basic side, it is not just GameStar owners that need help on that score - I'm sure many existing FORMAT readers will benefit from such a series.

The games supplement is on hold at the moment, due to the very poor response shown so far by writers. However I would welcome any items you would like to produce, both for FORMAT or for a future games publication.

Dear Editor,

I spent a very nice day giving Nev a hand, on the FORMAT stand at the All Format Show in Haydock. Business was very slow and I know a lot of SAM users didn't go because Samco wasn't there.

Just in case you haven't been able to talk Nev into keeping up with the help page, I have sent in some info on how to get Lords of Midnight running on Sam. He was asking for this in the last column.

Nigel Kettlewell (and not me) found the solution. The problem is in the Spectrum ROM and you have to POKE memory location 3789,201 to stop the program locking up when you enter night mode.

I have some pokes for Lords of Midnight that will let you keep walking at night and avoid fighting the nasties. You also start the game with all the Lords to hand, but not listed on the menu. This could be more of Nigel's handy work, but as the pokes are very old I'm not sure.

```
 5 REM Lords of Midnight pokes
10 CLEAR 65535: POKE 23570,16
20 PRINT AT 9,6;"START THE TAPE"
30 LOAD "" CODE 16384
40 FOR F=23317 TO 23335: READ A: POK
   E F,A: NEXT A
50 DATA 33,0,0,34,99,253,34,14,8,96,
   33,24,62,34,195,90,195,98,195,117
   ,96
60 RANDOMIZE USR 23300
```

Any one having problems with the program can contact me.

I have been sent some excellent software for the Sam Coupe, from Dylan Kevin Hall (Colony Software), of Australia, to sell for him. I have been selling his Sam Sound Digitiser program for some time.

I am looking for a program on SAM or Spectrum to be used for working out the time in pigeon racing, over distances. If anyone has such a program can they please get in touch with me. I will refund any postage.

Yours sincerely, Derek Morgan.

Thanks for the hints Derek. If you have any programs for sale then send down some review copies and I will see what we can do in a future issue of FORMAT. I'm sure from the descriptions of the programs you gave (sorry I had to cut your letter so much) that there will be many FORMAT readers interested in them. We will pass on any letters from readers. Ed.

Dear Editor,

Please find enclosed some servicing notes for Sinclair computers which came from Television magazine circa May 1986, no doubt someone at INDUG would be able to use them.

Thanks for the excellent magazine, but could you organise more software along the lines of PD, Demos and Utilities? I know the policy is to type in listings in order to learn about programming, but when I see a "MegaDemo" such as the Lyra II or MM13, I feel that these programs should be shared with the Speccy community and might serve as an inspiration to others.

Yours sincerely, Mark Tomes.

The servicing articles are much appreciated Mark. I will try to get extracts printed for readers in a future issue.

Yes, I do like type-in listings, and our readers seem to like them as well. However the success of the first SAM Demo Disc has prompted me to look at doing some more. A Spectrum demo disc would also be nice, if I can find sufficient material to do one. Ed.

Dear Editor,

I have just seen, on BBC's Ceefax that the "Oxford English Dictionary, 20 Volumes 21728 pages, 59,000,000 words" is now available on a single disc for computer users.

Do you have any information on this and does it or will it include the Spectrum?

I am considering changing to SAM, is it possible to update your SAM reports and to say what is available at the moment.

Yours sincerely, Harry Connell.

The OED is available on disc for PC type computers. While it would be possible to read the disc on the Spectrum or Sam you would not be able to make sense of it. This is because to get all those thousands of words onto disc they have to be stored in compressed form - and the software to decompress is in PC machine code. So no, sorry Harry, the disc would be no good to you.

However, if you upgrade to SAM there is an excellent Spell Checker program coming from FRED Publishing. Ed.

Dear Editor,

Could you let me know if anyone produces a "Y" connector which is able to run a PLUS D and a Datel Electronics Genius Mouse interface from the edge connector of the Spectrum 128K+2.

Yours sincerely, R.D.Jones.

You really need the TWO-FACE device that was produced by MGT a few years ago, you may be lucky and pick one up secondhand. Alternatively, there is a new switchable two-way device coming - keep reading FORMAT, as soon as it is released we will let you know. Ed.

Dear Editor,

I would like to draw to the attention of the members who are following Carol's excellent Machine Coding articles to a very useful book I have just purchased from Bernard Babani (Publishing) Ltd of:- The Grampians, Shepherds Bush Road, LONDON, W6 7NF.

Titled "An Introduction to Z80 Machine Code" after an introduction an Instruction Set lists the Assembler Codes and the HEX equivalents (which with the aid of SAM's HEX$ converter (Page 146) I have written in the decimal numbers in red ink.)

It gives the clock cycles for each code and how the flags are affected and whether implicit or indexed etc.

The price is only £2.75p plus postage of 35p and is in my opinion a very useful book at a reasonable price.

Yours sincerely, Eric M.Day.

Re: Phone call from Steven Masey.

The answer to most of your questions are in the editorial this month and Bob will have more news in the next issue.

As one of our younger and enthusiastic subscribers of FORMAT, just thought we would mention your name and give you a word of encouragement to keep going with your SAM as you sounded concerned over the phone.

Remember, anyone with any problems, we are always here to help. JENNY.

That's twice that woman has mussled in on the letters page, I'll have to keep an eye on her, she may be after my job. Ed.

* - * - * - * - * - *

Letters may be shortened or edited to fit on these pages.

This is YOUR letters page so it is up to you, our readers, to fill it. Send your letters, on any subject you feel would interest other readers, to our usual address, keep them as short as you can so we can fit in as many as possible.

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